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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,701	11/09/2001	Hans-Ueli Roeck	34152	7952

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EXAMINER	
LEE, PING	

ART UNIT	PAPER NUMBER
2615	

DATE MAILED: 05/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/044,701	ROECK ET AL.	
	Examiner	Art Unit	
	Ping Lee	2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 February 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 20-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Killion et al (US006101258A).

Regarding claim 24, Killion et al (hereafter Killion) disclose a method for operating a hearing device (hearing aid) in which one of several possible hearing programs (omnidirectional or directional programs) is selected at a given time in response to a switching state value (from 270) comprising the steps of providing a microphone (240, 235, or 230 in Fig. 13); providing transfer functions (the gain and equalization for mic 240 and 235, or the gain for mic 230) between the microphone and a hearer, the transfer functions having parameters (the gain is varied from 0 to 1 based on the resistance provided by the FET; col. 8, lines 50-55) and corresponding with the programs (for omnidirectional program, the gain is 1 for FET 275; for directional program, the gain is 1 for FET 260 and 255); initiating a change in at least one of the parameters in response to said switching state value (from 270) from a momentary value (for example the gain is zero for mic 230 at the beginning) to a desired value (the gain is 1) in time-based manner (the gradual change from gain being zero for mic 230 to the gain being 1 would require an amount of time depending on the time constant of the

rectifier). Figs. 10-12 illustrate the gradual change of the amplitude. Gradual by definition means to change slowing and smoothly, which inherently require a finite amount of time.

Regarding claim 20, Killion discloses hearing device, whereas at least one smooth transition (gradual change in Killion reads on claimed smooth transition) filter unit (260,255,275) is provided which filter unit (260,255,275) generates time-based transitions (see the interpretation above for claim 24) of parameters which are affected by hearing program switching (omnidirectional or directional programs) in response to a switching state value (from 270), in that values of the parameters (signal received by the microphones) to be changed by a hearing program switching are passed through the filter unit (260,255,275) in order to obtain a smooth transition from a momentary (for example the signals from microphones 240 and 235 are not attenuated) to a desired parameter value.

Regarding claims 21 and 22, the claimed low-pass characteristic and the ramp generator read on the logarithmic rectifier.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1-12, 1/19, 2/19, 3/19, 4/19, 5/19, 6/19, 7/19, 8/19, 9/19, 10/19, 1 1/19, 12/19 and 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jensen (US00670442281) in view of Killion.

Regarding claim 1, 2, 7-12, 1/19, 2/19, 7/19, 8/19, 9/19, 10/19, 1 1/19, 12/19, 20 and 24, Jensen discloses a method for operating a hearing device (hearing aid) in which one of several possible hearing programs (omnidirectional or directional programs) is selected at a given time in order to adjust to a momentary acoustic surround situation (noise condition; col. 1, lines 28-29, 39-44), in that parameters (the coefficients for X_{front} and X_{back} respectively; col. 6, line 58) of a transfer function (the function between the input and output) provided between a microphone (Fmic or Bmic) and a hearer are changed, whereas the parameters (the coefficients for X_{front} and X_{back} respectively; col. 6, line 58) to be changed according to the hearing program switching are adjusted from a momentary value (for example, omni is 0) to a desired value (omni is 1) in a smooth manner (abstract, col. 2, line 22, col. 5, line 10) in order to provide a smooth transition from one hearing program to another by initiating a time-based transition (smooth transition is inherently time-based to provide gradual change over a time period).

Jensen suggests having a smooth transition, but fails to explicitly disclose how the smooth transition is in response to a switching state value. In the same field of endeavor, Killion teaches how to smoothly change from directional response to omnidirectional response or vice versa by measuring the ambient noise level (Fig. 13, 270) and controlling the gains of the amplifiers accordingly. Thus, it would have been obvious to one of ordinary skill in the art to modify Jensen by initiating the transition in response to switching state value as suggested in Killion in order to provide proper microphone reception according to the noise condition.

Regarding claims 3, 4, 3/19, 4/19 and 21, the claimed step response of a low-pass filter reads on the response of the logarithmic rectifier as taught in Killion.

Regarding claims 5, 6, 5/19, 6/19 and 22, the claimed ramp generator reads on the response of the logarithmic rectifier as taught in Killion.

5. Claims 13-18, 13/19, 14/19, 15/19, 16/19, 17/19 and 18/19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jensen in view of Killion as applied to claims 1-12, 1/19, 2/19, 3/19, 4/19, 5/19, 6/19, 7/19, 8/19, 9/19, 10/19, 11/19, 12/19 above, and further in view of Ruegg (US 3,875,349).

Regarding claims 13-18, 13/19, 14/19, 15/19, 16/19, 17/19, and 18/19, Jensen fails to teach manual intervention. Jensen however teaches a switch-over or a smooth change-over (col. 5, line 10). The "switch-over" in Jensen implies non-smooth changing. Killion suggests the manual intervention in another embodiment as shown in Fig. 1. Ruegg teaches a hearing aid not only need automatic control of the hearing program, it also needs manual control that will enable the user to have control over his/her hearing aid when he/she has a desire to change the program (col. 3, lines 36-41). Thus, it would have been obvious to one of ordinary skill in the art to further modify Jensen and Killion's system in view of Ruegg by having a manual intervention over an oversteer unit in order to enable the hearing aid's wearer to have a manual control over the hearing program when he/she wants have a change.

Response to Arguments

6. Applicant's arguments filed 2/8/06 have been fully considered but they are not persuasive.

In response to applicant's argument that Killion does not have a switching state value and a time-based transition, this is not convincing. The rectifier generates a switching state value to control the gain of the amplifiers. Since the change of the gain is being done gradually and smoothing, instead of instantaneously, this transition from a momentary value to a desired value is being performed over an amount of time. One skilled in the art would have recognized that a rectifier has a time constant that determines how fast and slow the gradual change would be.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ping Lee whose telephone number is 571-272-7522. The examiner can normally be reached on Monday and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian C. Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ping Lee
Primary Examiner
Art Unit 2615

pwl